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ABSTRACT

This study charts the development of social interchange patterns (reciprocity) between familiar peers and adults from written and videotaped observations of 72 children at ages 12, 18, 24, 30, 36, and 42 months. Two additional groups of eight children were observed over a 12-month interval in a parallel longitudinal design. Measures included prosocial and assertive response units as well as structural features of the interchange sequences. Findings, supported by both the longitudinal and the corss-sectional design, indicated that: (1) prosocial acts increased over time and the relative number of assertive acts decreased; (2) even the 12-month-olds discriminated between social partners and emitted few assertive acts with adults; (3) the increase in prosocial acts was due in part to changes in the form of the acts, i.e., an increase in verbal initiations; (4) the increase was also due to the growing capability of the child to maintain interchanges, first by responding to overtures rather than ignoring them and subsequently by varying the response acts in elaborated patterns; (5) the major changes in form and content of social acts with peers were preceded by the appearance of that pattern with adults. The data strongly support the view that the development of reciprocal acts reflects simultaneously changing capabilities of children and concomitant shifts in the social feedback provided them. (Author/MS)

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The Development of Social Interchange Patterns from 12-42 Months: Cross-Sectional and Short-Term Longitudinal Analyses.

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PS009268

Paper presented at the Biennal Meeting of the Society for Research in Child Development. New Orleans, March, 1977.

The Development of Social Interchange Patterns from 12-42 Months: Cross-Sectional and Short-Term Longitudinal Analyses.

Margaret C. Holmberg

Introduction

The work I shall discuss is a partial report of continued efforts to describe the development of reciprocal interchange patterns in very young children. The work follows from the orientation that the analyses of social behavior require attention to behaviors of both members of the social relationship. Also along with others in this session the orientation is that these social relationships previously thought to occur in infancy only with the mother do in fact occur with other adults and even peers!

Only recently have theoretical proposals been offered and a limited number of laboratory studies been conducted regarding interchanges at early ages with persons other than mothers. A comprehensive examination of the development of interchange patterns is lacking. My earlier work showed that there were major differences in child interchanges with adults and child-child interchanges. The problem for this study was to determine how the differences change as a function of the changing status of the child. It seems evident that social interchanges are necessarily a function of both the feedback from the partner and the particular skill level of the child. How these two functions interact in development is what I want to discuss today.

Method

In brief, I used three designs involving independent samples to analyze the data: a cross-sectional design with observations made at six age levels from 12 to 42 months and two short term longitudinal designs with initial

observations made at 18 and 30 months and again 12 months later at 30 and 42 months. A total of 88 children were observed in six different day care centers. Each child was observed for 15 minutes on two different days for a total of 30 minutes. The Centers as a whole included children from varied SES and ethnic backgrounds. All children in the longitudinal groups were enrolled in the intervention program at the Frank Porter Graham Child Development Center. (See Appendix for a summary of the design and method).

Two procedures were used to obtain the data. A written continuous behavior record for each child was made on the spot in 5 sec. intervals. Included in this record were the social behaviors of the child and those interacting with him. To supplement this procedure and to aid in the scoring a video tape was made simultaneously. A portable video system was used to follow individual children and to record the behavior of all others involved in the interchanges. Later a digital timer was superimposed onto the tapes to facilitate analyses.

The measures were obtained from two basic scoring systems: one monadic, the other dyadic. In the monadic analysis, social behaviors per se were scored according to the behavior which began or initiated the interchange. This non-dyadic system, called the initiation measure, I felt was important to preserve the behavior content for the developmental analyses.

To give a general overview of the behaviors and to relate the work to other studies, the initiation measures were categorized by the global descriptions of prosocial and assertive. Examples of those behaviors are given in the Appendix.

The second scoring system, the dyadic system, took into account the responses of the social partner in the course of the interchange and thus reflected the pattern of the interchange. One pattern category, elaborations

which I will discuss today, was further subdivided according to its content. These appear in the Appendix.

Reliability with a second person was obtained both on the direct observation record and on the initiation and pattern scoring schemes. For both cases and at each age level the agreement between the two persons was above 80 percent.

Results

Figure 1 illustrates two points concerning the social relationship

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Insert Figure 1 About Here

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between adults and children over the six age levels. First, little change was observed between 12 and 42 months in the over-all frequency of behaviors. That is, prosocial intiations (the first response used to begin an interaction) remained stably high. Assertive initiations remained stably low. Thus the second point. Already by 12 months the children discriminated clearly their behaviors with adults. The longitudinal groups are not shown here but the same nondevelopmental trends with adults occurred at ages 18, 30, and 42 months.

We see a somewhat different developmental picture in Figure 2 of child/

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Insert Figure 2 About Here

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child dyads. The prosocial initiations with peers increased steadily over the 30 month age span. This was true for the longitudinal children also. The assertive initiations were fairly stable and were more frequent with peers than with adults. As you remember they averaged about 1 with adults.

Although at 18 and 30 months there were significantly more assertive initiations they certainly show no particular developmental trend. Furthermore the means of the children in the longitudinal sample fell between 5 and 6 at all overlapping ages.

What we have seen, then, in these data is that younger children were as active with adults as older children and emitted different behaviors with adults as proficiently as the older children. On the other hand, the younger children emitted few prosocial acts with peers and, interestingly, an equal amount of assertive acts. By 42 months, however, the increased frequency of prosocial acts resulted in relative fewer assertive intiations with peers.

This significant decrease in assertive initiations is illustrated in Figure 3, which shows the proportion of all initiations that were assertive.

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Insert Figure 3 About Here

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This figure also shows the importance of the two scoring systems. The initiation or monadic score is the behavior of the person beginning the interchange. That measure is reflected in the left graph. The pattern or dyadic score takes into account not only the initial act but the partners responses. When patterns are categorized as prosocial or assertive, the assertive measure is much lower (as you see in the right graph). Thus the initial act does not necessarily dictate the nature of the interchange pattern. In the case of the assertive acts what frequently happened was that the initiations were ignored or they were rechanneled to positive interchanges.

Since the prosocial acts were the ones which accounted for developmental differences, how did these prosocial initiations change? First, the increase was not merely in the frequency of the same acts but in the form of the positive acts emitted. The expected and not surprising increase in verbal initia-

tions appeared at 24 months and continued upward to 42 months, thus providing these older children with greater flexibility and variety of prosocial interchanges.

Equally important for interchange analyses, the increase in prosocial acts reflected the child's and the partner's capabilities to support the continuation of positive interchanges. I chose to illustrate this point today with one prototype of patterns, elaborated sequences. This pattern is defined in the Appendix. It included 4 action-reaction responses with variability in the actions. An example is: Rebecca offers a hat--Alan takes it--Rebecca vocalizes--Alan laughs and gives it back.

What happened with these longer sequences? As shown in the right hand graph, there was again no change with adults from 12 to 42 months. On the

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Insert Figure 4 About Here

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other hand, changes were quite obvious with peers, the increase beginning at 30 months and climbing systematically to 42 months. These data point to the importance of the feedback from the partner in determining the course of the interchange. Children under 30 months were capable of elaborations if the dyad included an adult.

These changes with peers occurred among the longitudinal children as well. Adult interchanges in the longitudinal groups were almost as stable but did drop at 42 months.

Surely though, there were differences in the elaborations involving children and adults from 12 to 42 months. To identify the differences I examined the content of the elaborations according to several functional categories.

Figure 5 shows that, surprisingly, adult elaborations were not centered

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Insert Figure 5 About Here

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around caretaking activities at any age. Rather at the younger ages they were primarily instructions (how to stand to walk, how to dail a telephone...). At the older ages they were largely conversations.

In the child/child elaborations at the younger ages the content was

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largely object possession (offer and take toy sequences), then became interchanges concerned with the coordinated use of materials, and conversational as with adults. Thus, the content of elaborations was quite different between the adult/child and child/child dyads at the younger ages but quite similar at the upper ages.

Summary and Conclusions

Now to return to the original problem of interchange development, first we ask do interchanges develop? If we are talking about adult/child interchanges and <u>if</u> we stay with some of our basic measures, we have to say no, they do not develop. For instance, there were no significant differences or only modest ones in adult prosocial or assertive intiations, nor were there differences in the elaborations, the essence of interchanges. The 12 month olds appeared as socially competent as the 42 month olds <u>when</u> their partner was an adult. Only when a finer grained interactional analysis was made did the developmental shift with adults reveal itself. Why did we find

no differences in our molar measures? What looked like no developmental changes was really the adult teachers being very sensitive to their children's social skills and their ongoing activities. The adults were able to modify their feedback to fit the child's responses and thus maintained the interchange. By way of example, a 12 month old is running in and out between cribs in the nursery. The teacher watching his movements, waits until he reappears and says "peek-a-boo"--child looks up: runs back--teacher, "Where's Alan?"--Alan returns, laughs--teacher laughs "peek-a boo"--Alan runs back, vocalizes--and the game continues.

But obviously the child's developmental status does make a difference for some interchanges. In the data we saw, differences showed up in virtually all age analyses of child/child interchanges. The finer grained analyses were not needed to pick up the developmental shifts with peers. These effects fit a simple generalization, that the child's growing response capabilities permit alternative actions both to initiate social interchanges and to allow the feedback necessary for interchanges to expand.

As I suggested earlier and what the findings confirmed is that the bi-directionality of interchanges must be considered to answer developmental questions.

Finally, this developmental account constitutes a necessary step in the systematic study of social interchanges. Clearly the characteristics of both partner (whether a parent or teacher: sibling or peer) and the child are interwoven at each developmental stage to determine the complexity, form, and outcome of the interchanges.

There has been a good deal of speculation recently about the interchange competency of young children but these data remind us of the compentency of adults.

Figure Legends

Figure 1: Frequency of Prosocial and Assertive Initiations involving Adult/Child Dyads.

Figure 2: Frequency of Prosocial and Assertive Initiations involving Child/Child Dyads.

Figure 3: Assertive Initiations (left graph) and Assertive Patterns (right graph) as a proportion of total interchanges with peers.

Figure 4: Frequency of Elaborated (four action-reaction responses from the dyad) Interchanges in Child/Peer Dyads and Child/Adult Dyads.

Figure 5: Frequency of caretake, instruction, and conversation in Adult/Child Elaborations.

Figure 6: Frequency of object possession, joint object use, and conversation in Child/Child Elaborations.

FIG. 1

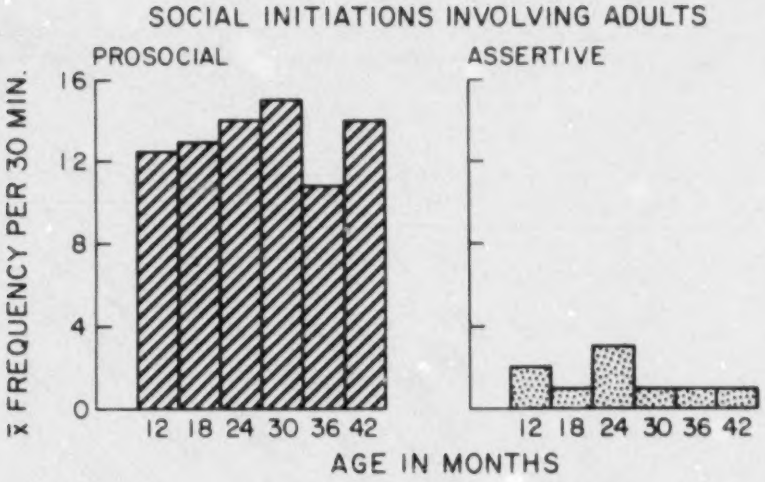


FIG. 2

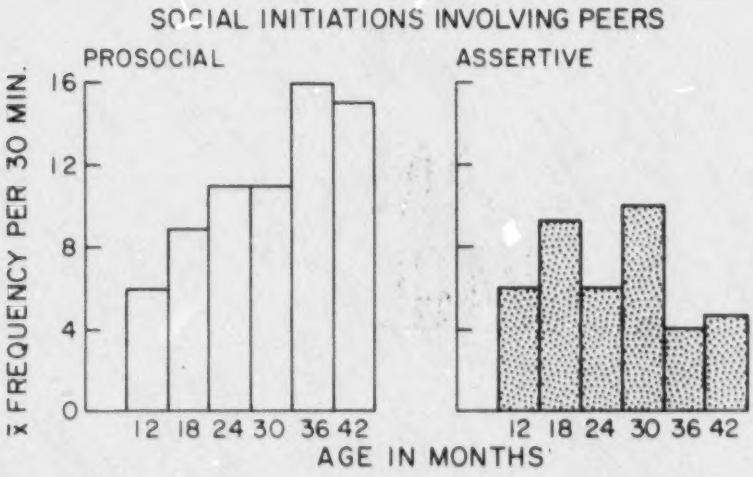


FIG. 3

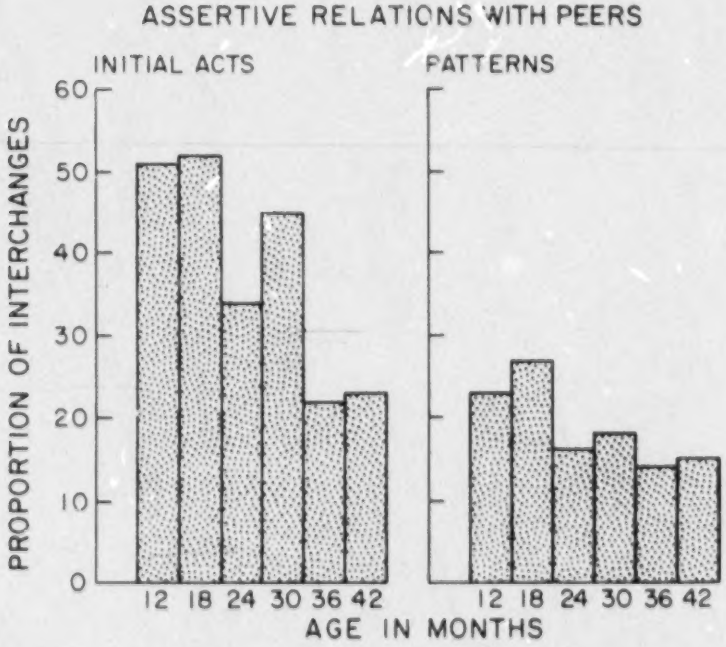


FIG. 4

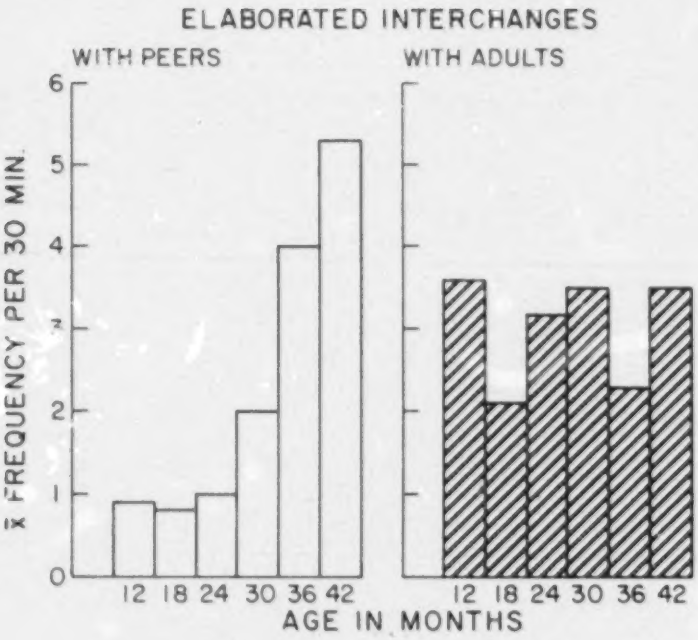


FIG. 5

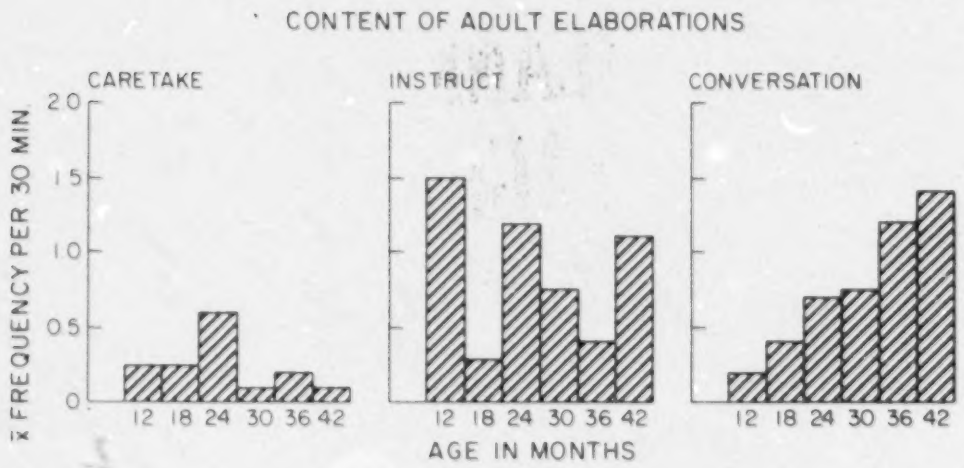
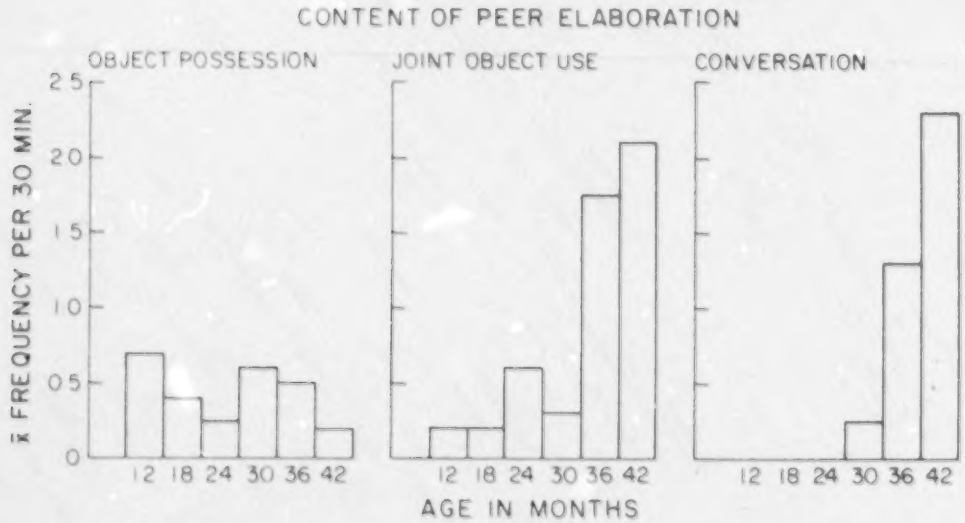


FIG. 6



APPENDIX

The Development of Social Interchange Patterns from 12-42 months: Cross-Sectional and Short-Term Longitudinal Analyses

Margaret C. Holmberg
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DESIGN:

	Age Levels in Months						
	12	18	24	30	36	42	Total N
Cross-Sectional	12	12	12	12	12	12	72 (Equal Number of boys and girls)
Longitudinal I		8----------		----------8			8 " "
Longitudinal II			8----------		----------8		8 " "
							88

METHOD:

Observations: A total of 30 minutes per child (two 15 min observations over two days separated by one week or less). Behaviors recorded in 5 sec intervals using both direct observation and video tape analyses.

Measures:

Monadic analysis. The bases of initiation measure. Behaviors scored of both child and partner.

(Examples of Prosocial Behaviors: Hugs, pats, and tap; offers to show or to give; questions, statements, and commands; gestures and noises; changing diapers and blowing noses.)

(Examples of Assertive Behaviors: taking toys; hitting and pushing; fussing to protest; negative commands.)

Dyadic analysis: Patterns of interchange characterized by behaviors of both dyad members.

ELABORATION=four or more acts by the two persons and some variability in the actions-reactions. Frequent content concerned possession of objects, joint use of objects, conversation, and instruction.

Other dyadic patterns (e.g. escalation) are not discussed in this paper.